WITHDRAWN

CVA5

EFFECT OF COMPLIANCE ON HEALTH AND ECONOMIC OUTCOMES: ROLE OF CONJUGATED ESTROGEN ON DEPRESSION AND CARDIOVASCULAR DISORDERS.

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OBJECTIVE: The study purpose was to identify the effect of compliance with conjugated estrogen on subsequent clinical event rates and their economic impact.
METHODS: Claims from a large Midwest health care plan were screened to identify females receiving a new prescription for conjugated estrogen from 7/1/93 to 6/30/94 and continuing enrollment to 12/31/96. Compliance was calculated by prescription fill quantity divided by enrollment days. Two subgroups (100% compliant versus one prescription only) were analyzed. Endpoints were the diagnosis of depression, myocardial infarction or congestive heart failure, physician office visits, and total health care expenditures.
RESULTS: 1112 patients (mean age 57.87) were 100% compliant; mean follow-up, 42.1 months. 900 patients (mean age 57.62) received one prescription only; mean follow-up, 41.8 months. Diagnostic rates between the groups were not different for depression, but less ($p > .05$) in the compliant group for cardiovascular disorders. Office visit rates were less ($p > .0001$) in the compliant group for depression and cardiovascular disorders. Total health care expenditures were $220 per patient per month (pppm) for the compliant group and $251 pppm for the non-compliant group ($p > .05$). Pharmacy expenditures were higher in the compliant group ($74.84 to $53.62 pppm), but medical costs in the non-compliant group exceeded that differential.
CONCLUSIONS: Compliance with conjugated estrogen therapy reduced the diagnostic rate of selected cardiovascular disorders and decreased office visit rates for selected disorders. Total health care expenditure was less in the compliant group. The relatively short time frame to these results is especially attractive to health care plans.

CVA6

CONFOUNDING BY INDICATION IN CALCIUM CHANNEL BLOCKER TREATMENT OF HYPERTENSION OR ANGINA

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Observational studies of calcium channel blockers (CCBs) prescribed for hypertension or angina may be subject to indication bias if this class of drugs is selectively prescribed to patients at higher risk due to comorbidities.
OBJECTIVE: To determine if prescribing of calcium channel blockers is associated with prior diagnoses of conditions known to be risk factors for cardiovascular events.
METHODS: Using Pennsylvania Medicaid's paid claims data, we identified all continuously enrolled recipients aged 18 to 61 who filled at least one prescription for an antihypertensive or antianginal medication in 1990, 1991, or 1992. An index date equal to the date of the first dispensed prescription in that period was created. All medical and prescription claims during the year prior to the index date were examined for the existence and dates of relevant diagnoses that preceded any prior classes of pharmacotherapy. Chi-square tests of associations between each such diagnosis and each class of subsequent pharmacotherapy were conducted.
RESULTS: Among 11,141 patients with prior monotherapy, CCB treated patients ($n = 1,703$) had significantly ($p < 0.01$) greater odds of a prior diagnosis of acute myocardial infarction (AMI), angina, arteriosclerotic cardiovascular disease, COPD, diabetes, ischemic heart disease, or hypertension than those treated with beta blockers ($n = 2,684$), diuretics ($n = 4,188$) or any non-CCB monotherapy ($n = 9,438$). Except for AMI, these results were confirmed when we examined diagnoses made 7 days or less before the first prescription was dispensed in the prior year.

CONCLUSIONS: Because subjects in observational studies are not randomized, confounding by indication must be explicitly measured by testing the association between prior risk factors and the selection of initial pharmacotherapy class. CCBs are susceptible to indication bias.